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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/560,537	02/28/2007	Alexander Fridman	DXPZ-0005	6456
23377 7590 12/20/2010 WOODCOCK WASHBURN LLP CIRA CENTRE, 12TH FLOOR 2929 ARCH STREET PHILADELPHIA, PA 19104-2891				
EXAMINER MAYEKAR, KISHOR				
ART UNIT 1759		PAPER NUMBER		
NOTIFICATION DATE 12/20/2010		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

eoofficemonitor@woodcock.com

Office Action Summary

Application No.

10/560,537

Applicant(s)

FRIDMAN ET AL.

Examiner

Kishor Mayekar

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Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 November 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 12-36 is/are pending in the application.
- 4a) Of the above claim(s) 12-36 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-942)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 05/06 & 07/08
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. The response dated 12 November 2010 which includes a response to restriction and an amendment to the claims has been entered. Claims 1 and 12 have been amended and claim 11 has been cancelled. New claims 33-36 have been introduced. Claims 1-10 and 12-36 are pending in this application with claims 1, 12, 18, 33 and 34 being independent claims.

2. Applicant's election with traverse of Invention of Group I, claims 1-10 in the reply filed on 12 November 2010 is acknowledged. The traversal is on the ground(s) that "none of the claims are anticipated by the Tylko reference". This is not found persuasive because amended claim 1 is anticipated by the teachings of Orbach (US Pat. No. 3,042,830), Tuszko et al. (US Pat. No. 4,927,298) or Torregrassa (US Pat. No. 5,116,488) as described below.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102 and § 103

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-8 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Orbach '830. Orbach's invention is directed to an apparatus for effecting gas-stabilized electric arc reactions. With respect to claim 1, Orbach disclose in Figs. 1-4 that the apparatus comprises the recited frustum-shaped portion 11, an axial flow apparatus 15 (where the flow shows straight thru an arc gap 23), the recited circumferential flow apparatus 41, and the recited inlet 16. As to the limitation of the axial gas flow apparatus configured to provide an axial flow directed upward, Orbach's apparatus reads on it when turning his apparatus to 180°. If not, there is nothing in Orbach's teachings of preventing the operation in the reverting to 180°, absent of evidence to the contrary.

As to the subject matter of claim 2, Orbach teaches the provision of a recess 22, or hollow body 20.

As to the subject matter, it is inherent in the generating of the electric arc.

6. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Orbach '830. The difference between Orbach and the instant claim is the provision that a sidewall of the frustum-shaped portion functions as a second electrode. Although Orbach does not teach

the limitation, one skilled in the art would have been motivated to select the sidewall of the frustum-shaped portion **either** in electrical contact with an anode 19 with an electrical insulator to attach a cathode 12 to the frustum-shaped portion **or** in electrical contact with the anode and insulated the anode from the frustum-shaped portion with an electrical insulator.

7. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Tuszko '298. Tuszko's invention is directed to a cyclone separating apparatus. With respect to claim 1, Tuszko discloses the apparatus comprising the recited frustum-shaped portion, flow apparatus, recited circumferential flow apparatus, and an inlet, for introducing of particulate suspensions, connected to the reaction chamber (Figs. 1-5), where air is introduced from the bottom of the flow apparatus to its top (the flow of air read on axial flow directed upwards).

As to the subject matter of claim 2, Tuszko discloses it in Fig. 5, where valve 22 reads on the recited flow restrictor.

As to the subject matter of claim 3, the inside of the valve reads on the recited channel.

8. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Torregrossa '488. Torregrossa's invention is directed to a gas sparged centrifugal device. With respect to claim 1, Torregrossa discloses in Fig. 1 and c. 1, l. 9-28 that the device comprising the recited frustum-shaped portion, flow apparatus, recited circumferential flow apparatus, an inlet, for introducing slurry, connected to the reaction chamber, where a gas introducing at an inlet, **when** acts upon

the slurry, causes particles in the slurry to move upwardly to conduit 14. As such, the flow apparatus reads on the recited axial flow apparatus.

As to the subject matter of claim 2, Torregrossa discloses the recited gas supply and porous wall (the porous wall read on the recited flow restrictor).

As to the subject matter of claim 3, the inside of the porous wall reads on the recited channel.

9. Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Torregrossa '488 in view of Tuszko '298. Torregrossa as applied above do not disclose the provision of a flow restrictor to the flow apparatus as claimed in claim 2. However, it is known in the art to control the flow of gas into a chamber by installing a valve, for example Tuszko teaches the provision of a valve in Fig. 5 to control a flow of gas into a chamber. As such, the provision of a flow restrictor in Torregrossa to control the flow of gas into the frustum-shaped portion would have been within the level of ordinary skill in the art. Further, Torregrossa discloses the provision of a shroud means 25 in Fig. 1 that reads on the recited flow restrictor and the subject matter of claim 5.

As to the subject matter of claim 4, the placement of the flow restrictor with respect to other flow apparatus, i.e. for accessible, would have been within the level of ordinary skill in the art.

Oath/Declaration

10. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration dated 28 February 2007 is defective because:
Non-initialed and/or non-dated alterations (with respect to the third inventor, Young Cho) have been made to the oath or declaration. See 37 CFR 1.52(c).

Conclusion

11. Elected claims 1-10 are rejected.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kishor Mayekar whose telephone number is (571) 272-1339. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexa Neckel can be reached on (571) 272-1446. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you

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would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kishor Mayekar/
Primary Examiner, Art Unit 1759